

## Building Façades

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## Description

- Prescriptive power density (LPD) and mandated additional lighting controls.
- LPD maximums vary from 0.00 W/ft<sup>2</sup> to 0.50 W/ft<sup>2</sup> by four lighting zones.
- Lighting power allowance is only for façade lighting; no trading with any other allowance.
- No power allowance if a façade is not lit, a “use-it-or-lose-it” allowance.



## Design Criteria

- IESNA recommends design conditions in RP-33-99 and the IESNA Lighting Handbook, Ninth Edition .
- 2-5 average fc on façade for dark conditions, 5-15 fc for bright surroundings.



## Design Criteria

LZ	Description Target	Footcandles
1	Dark, critical zone	No façade lighting
2	Dark ambient, med. light wall	3 fc
3	Bright ambient, light wall	5 fc
■	Bright ambient, med. dark wall	10 fc
■	Light loss factor of 0.70 for models.	
■	Models use mean lamp lumen ratings.	





## Lighting Equipment

- Lamp types for models include compact fluorescent, linear fluorescent, metal halide.

Lamp Types	Mean Lumens Per Watt
Incandescent	10
Small CFL	45
Halogen IR	20
Compact Fluorescent	55
Biax/T5HO	75
T8/T5	90
Small Metal Halide	50
Pulse Start Metal Halide	75



### Lighting Models

LZ	Lamp	Type Fc	Width x Height	LPD
2	CFL	3	75 x 9	0.18
2	28 W T-5	3	75 x 12	0.18
3	28 W T-5	5	75 x 12	0.30
3	Metal Halide	5	75 x 12	0.30
3	Metal Halide	5	150 x 35	0.30
4	Metal Halide	10	75 x 12	0.50
4	Metal Halide	10	150 x 48	0.50



### Recommendations

LZ	Maximum LPD (W/ft <sup>2</sup> )
1	0.00
2	0.18
3	0.30
4	0.50



## Recommendations (cont.)

Lighted Area and Calculating Allowed Lighting Power:

- Use the entire façade for lighted area, but only areas intentionally lighted.
- No tradeoffs between any other facades or outdoor or indoor areas.
- “Use-it-or-lose-it.”
- A lighted roof is considered a separate façade.





## Recommendations (cont.)

### Lighting Controls:

- Title 24 now mandates controls to turn off outdoor lighting during day.
- Additional mandatory requirement that at least one-half of the façade lighting use a timeclock that allows outdoor lighting to be turned off during non-business hours or other curfew period.

